DOCUMENT RESUME

ED 279 023 CS 210 326

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TITLE Determining the Independence of Dispositional and Situational Writing Apprehension.
PUB DATE Mar 87
NOTE 15p.; Paper presented at the Annual Meeting of the National Council of Teachers of English Spring Conference (6th, Louisville, KY, March 26-28, 1987).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Academic Achievement; *Behavior Patterns; *Classroom Environment; Intervention; Secondary Education; Stress Variables; Student Attitudes; *Student Behavior; *Writing Apprehension; *Writing Instruction; *Writing Research

ABSTRACT

To determine whether teacher intervention in the form of experimentally manipulated variables would significantly change the level of students' dispositional writing apprehension, a study evaluated the effects of two classroom interventions--one apprehension-producing (AP) and one apprehension-reducing (AR). Four situational variables were manipulated to construct the respective classroom environments--conspicuousness, evaluation, novelty, and ambiguity. Subjects, 321 secondary students divided into two groups, completed six writing assignments over a six week period under one of the two conditions. Subjects also completed a pre- and posttest of writing apprehension. It was hypothesized that the (1) growth scores in the AP group would be significantly different from those in the AR group, (2) number of students experiencing decreased dispositional apprehension would be significantly higher in the AR group than in the AP group, and (3) number of students experiencing an increase in dispositional apprehension would be significantly higher in the AP group than in the AR group. Statistical analysis confirmed all three hypotheses, supporting the assertion that dispositional and situational writing apprehension are independent concepts. Findings suggested that teacher intervention in the form of either increased or decreased apprehension levels in the classroom would have little effect on dispositional apprehension. (JD)

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DETERMINING THE INDEPENDENCE OF DISPOSITIONAL AND SITUATIONAL WRITING APPREHENSION

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Abstract

Prior research suggests that dispositional writing apprehension is associated with poor attitudes toward school and low achievement. Additional research suggests that SITUATIONAL APPREHENSION occurs when one or more of these variables are present in the writing environment: (1) high conspicuousness, (2) intensity of proposed evaluation scheme, (3) novelty of a particular writing assignment, (4) ambiguity of directions for writing, and (5) prior experience. What is not clear is whether manipulating the situational variables in a controlled classroom environment can bring about change in dispositional apprehension. Theorists suggest that dispositional apprehension and situational apprehension are independent concepts. The purpose of this study is to test this theoretical assertion.

The purpose of this study is to determine whether teacher intervention in the form of experimentally manipulated variables could significantly change the level of students' dispositional apprehension. Seven student teachers and one secondary education supervisor volunteered to participate in the experiment. Two classroom interventions were developed, one apprehension producing (AP) and one apprehension reducing (AR). Each student teacher selected two comparable classes in which to implement one AP treatment and one AR treatment. The treatments for each student teacher were assigned randomly by a toss of a coin. The treatments lasted six

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weeks. Six writing assignments per class were implemented according to experimental variables. Maintenance of treatment was insured through student logs and supervisor observation. The writing Apprehension Test, designed to measure dispositional apprehension, was administered to all classes prior to the treatment and immediately following the treatment. It was hypothesized that no significant differences would suggest that writing apprehension and situational apprehension are independent concepts. However, if apprehension scores between treatment groups were significantly different, it would suggest that dispositional apprehension and situational apprehension were related. ANOVA and chi-square tests of significance were performed and there were no significant differences. First, as theorists suggested, situational and dispositional apprehension may be two independent concepts. If that is true, teachers may have limited success in changing deeply ingrained attitudes by creating a supportive classroom environment.

BACKGROUND TO THE PROBLEM

Past research has shown that students who suffer from writing apprehension also experience decreased achievement (Faigley, Daly, and Witbe, 1981), are afraid to experiment with new verbal forms (Daly, 1977), and retreat from situations that demand verbal communication (Daly and Shamo, 1978). Daly (1978, 1979) and Daly and Miller (1975) have developed the Writing Apprehension Test (WAT), a twenty-six item instrument with a five-point Likert-type scale, to measure the degree to which a student is dispositionally apprehensive of writing. As Daly and Hailey (1984) note, dispositional writing apprehension measures supply one a general view of a given student's anxiety with respect to writing. The researchers suggest that situational anxiety is another way to look at the problem. Specifically, a writer could be more apprehensive in one situation than in another. For example, a graduate student might be more apprehensive about writing a six-hour qualifying examination than about writing a short paper for a specific course. Daly and Hailey conceptualized five situational variables that potentially could cause varying degrees of apprehension among writers: conspicuousness, evaluation, novelty, ambiguity, and prior experience. These variables were based on "observations of writing classrooms and reports by students and teachers" (p. 261).

Conspicuousness is the degree to which a student is identified with the written product produced. In a high conspicuous situation, a student's name would appear in large letters on the first page of a paper, visible to one and all. Evaluation is the degree to which a paper is corrected, marked, and commented on. In a high evaluative situation the teacher would mark every mistake a student made and cover the page with marginal and terminal comments. Novelty is the degree of newness a particular assignment has. In a situation involving a high degree of novelty, a student might be directed

to write a poem, when all previous assignments have required the student to write prose. Ambiguity is the degree of clarity and specificity with which the writing is assigned. In a highly ambiguous situation, the teacher might direct the student to write a four hundred word essay on birds, giving no hints as to purpose or audience. Prior experience is the compilation of the student's previous experiences with regard to writing. Students with high apprehension may have a history of negative experiences connected with writing, resulting from one or more of these apprehension-producing variables.

To test their conceptualization of situational writing apprehension, Daly and Hailey presented 399 undergraduate college students with a hypothetical writing assignment and the description of each of the five situational variables phrased either as anxiety-producing or anxiety reducing, the two conditions being randomly assigned. In addition, students were directed to take the WAT and 2 situational anxiety measures developed by Daly and Hailey after Spielberger (Spielberger, Garsuch, and Luschene, 1970) and Buss and Gerjouy (1957). Alpha coefficients for all three measures were above .90 (p. 266). A one way ANOVA on the manipulation checks of the two forms of each of the five situational variables supported their perceived differences (i.e., the high conspicuous situation was perceived as high and the low conspicuous situation as low). Correlations of the two situational instruments with the one dispositional instrument (WAT) indicated that dispositional and situational anxiety were independent concepts.

Given that situational and dispositional apprehension were independent, what we wanted to determine was whether manipulations in situational anxiety, as independent variables, could affect dispositional anxiety, the dependent variable. Whereas Daly and Hailey worked with artificial

situations, I wanted to test this idea with actual writing assignments, in local classrooms, over an extended instructional period.

RESEARCH QUESTIONS AND HYPOTHESES

Of the five situational variables conceptualized by Daly and Hailey, only one--prior experience--could not be controlled as a classroom intervention, or independent variable. The other four--conspicuousness, evaluation, novelty, and ambiguity--could be manipulated into apprehension producing (AP) interventions as well as into apprehension reducing (AR) interventions. If four AP variables were combined they could form a classroom environment significantly different from that produced by combining four AR variables.

It was possible, then, to construct two classroom environments, manipulating four of the situational variables, one environment aimed at producing apprehension (AP) and one aimed at reducing apprehension (AR).

Given that four of the five situational variables could be manipulated to form two experimental classroom environments, one AP and one AR, we decided to determine if the environment would be powerful enough to overcome students' prior experience with writing. At the outset of the experiment, we posed this research question:

1. Will the manipulation of situational apprehension variables affect dispositional apprehension?

We transformed this basic question into three basic research hypotheses:

H_1 The growth scores in the AP group will be significantly different from those in the AR group.

$$AP \lessgtr AR$$

H_2 The number of students experiencing decreased dispositional apprehension will be significantly higher in the AR group than in the AP group.

$$AR > AP$$

H_3 The number of students experiencing an increase in dispositional apprehension will be significantly higher in the AP group than in the AR group.

$$AP > AR$$

RESEARCH DESIGN

A 2 X 1 design for ANOVA of mean growth scores, with randomized assignment of treatment to intact classrooms, would be used (H_1). A subsequent chi square was used to determine significant differences in numbers of students changing attitudes (H_2, H_3).

THE EXPERIMENT

Seven secondary credential candidates in English and their university supervisor agreed to participate in this study. Since student teachers were about to begin full-time student teaching, each had a full schedule of English classes to instruct. To insure comparability, student teachers were directed to select two classes that enrolled identical student populations. For instance, a given student teacher had to select two sophomore English classes of mixed ability, rather than one freshman honors class and one senior basic English class. Since the University cannot require participating schools to assign students randomly for experimental purposes, researchers randomly assigned treatments to each of the seven pairs of identical classes by the flip of a coin. By design, each of the seven student teachers taught, then, one AP class and one AR class.

THE SUBJECTS. The subjects were 321 students, grades 7 through 12, enrolled in English classes offered at cooperating secondary schools.

TREATMENTS. Two experimental treatments were designed, each lasting the identical six-week period and each requiring six writing assignments, one per week. Each student teacher employed the AR ENVIRONMENT in one classroom, randomly assigned for that purpose. Student teachers were instructed to give six writing assignments, one per week, but otherwise following the district prescribed course of study. In teaching and assigning each of the six writing assignments, the teachers were instructed to (1) have the students submit their papers in a masked fashion (low conspicuousness), (2) evaluate papers, 1, 3, and 5 in binary fashion and papers 2, 4, and 6 by marking only specific problem areas discussed in advance of the submission of the papers (low evaluation), (3) explain clearly the relationship of each new writing assignment to the ones that preceded it (low novelty), and (4) explain in detail the purpose of the assignment and the audience for whom the assignment was to be intended (low ambiguity).

Each student teacher employed the AP ENVIRONMENT in the other of two classes, as randomly assigned by the coin toss. Just as in the other classroom, the student teachers made six writing assignments, one per week for six weeks. However, in these classes, student teachers (1) required students to submit papers with names clearly visible on top (high conspicuousness), (2) evaluate the papers completely, marking each error (high evaluation), (3) providing no transition between writing assignments (high novelty), and (4) giving minimal direction to the students about the purpose and audience of the assignment (high ambiguity).

Given the wide range of grade levels and school sites, it was impossible to control for curriculum. Nevertheless, each student

teacher controlled for writing assignments across treatments. In other words, if a given writing assignment was made in an AR class that same assignment had to be made in the corresponding AP class.

INSTRUMENTATION AND DATA COLLECTION

The Writing Apprehension Test (WAT) was administered to all students at the outset of the treatment. The WAT has 26 items in the form of statements about feelings a student has about writing. Individuals indicate the degree of agreement of disagreement of using a 5-point Likert-type scale. To accommodate for differences in reading ability, the teachers were instructed to read each item aloud and clarify any language that the students felt was ambiguous or difficult. According to Daly and Hailey (1984) this attitude measure tests dispositional apprehension, in other words general attitudes toward writing that the students hold. The researchers assumed that this measure would be a good indicator of prior experience since these attitudes had presumably been developing over 6-12 years of school. According to Fagan, Jensen, and Cooper (1985) the WAT has been used in over 40 studies. Internal consistency estimates range from .88 to .95. The validity of the test has been established in eight separate analyses, including correlation with performance on standardized measures of writing competency (e.g., SAT and ACT). Following the treatments, the measure was again administered in identical form. Consequently, a significant difference between groups in mean score growth would indicate a change in dispositional apprehension as a result of the situational apprehension variables inherent in the AP and AR environments.

In addition to the Writing Apprehension Test, each student teacher kept a research diary (Myers, 1985) of student behavior during the course of the two treatments.

Third, the university supervisor made 3-4 observations in each of the fourteen classes participating in the project and made observational notes on teacher-student interactions.

MAINTENANCE OF TREATMENTS

Differentiation of treatment was insured in three ways. First of all, student teachers were required to participate in a six-week training session prior to the experiment. In the training sessions, student teachers were given a review of research on writing apprehension, given introductory background information on how to conduct experimental research, instructed in data collection procedures, instructed as to the importance of maintaining the differential treatments, and given demonstration model lessons for each of the two treatments so that they could replicate these with ease in their own classrooms.

Second, the university supervisor observed each of the fourteen participating classrooms 3 times, making field notes on the teacher-student interactions and compiling data to satisfy us that the treatments had, in fact, remained distinct.

Third, during the course of the experiment, we held "trouble-shooting" sessions with the student teachers, asking questions about the conduct of the experiment, posing possible problems and solutions, and dealing with classroom problems that resulted from the conduct of the treatments.

DATA ANALYSIS

The Writing Apprehension Test was scored for both the pretest and the posttest. Fifty-five students were eliminated from the analysis. Students who had ether not taken both the pretest and the posttest or who had not participated in at least 25 of the 30 instructional days were eliminated from consideration. In addition, one of the seven student teachers failed

to turn in complete sets of data for the assigned two classes. As a result, the data analysis was based upon 266 students' scores, 130 students in six AP classrooms and 136 students from six corresponding AR classrooms. Pretest scores were subtracted from posttest scores to obtain growth scores. An ANOVA for mean growth scores was performed by class and by treatment as a whole. In addition an ANOVA was performed within treatment groups to determine if there had been any significant gain from pretest to posttest, irrespective of treatment.

The diaries the student teachers were read to determine that the student behavior in the two treatment groups was markedly different. For instance, there were recurring oral and written reports of agitation in the apprehension producing classrooms and some laxity in the comparable apprehension reducing classrooms.

The university supervisor's field notes verified that the teachers had indeed followed the two experimental treatments and had, indeed, treated the respective classes differently according to the prescribed treatment.

RESULTS

H_1 The growth scores in the AP group will be significantly from those in the AR group.

$$AP \lesssim AR$$

An ANOVA failed to reject the null hypothesis at the .05 level for the entire 12 classrooms as a whole or for any of the six pairs of classrooms.

H_2 The number of students experiencing <u>decreased</u> dispositional apprehension will be significantly higher in the AR group than in the AP group.

A chi-square test failed to reject the null hypothesis at the .05 level.

H_3 The number of students experiencing an increase in dispositional apprehension will be significantly higher in the AP group than in the AR group.

A chi-square test failed to reject the null hypothesis at the .05 level.

DISCUSSION

At the outset of the experiment, we wanted to determine whether Daly and Hailey's assertion that dispositional writing apprehension and situational writing apprehension were independent of one another. If they were independent, teacher interventions in either increasing or decreasing the level of apprehension in the classroom would have no effect on dispositional apprehension. Using seven pairs of identical secondary English classrooms, we implemented, for a period of six weeks, two contrasting writing environments, controlled by teacher manipulation of situational variables. Three null hypotheses failed to be rejected at the .05 level. This suggests that Daly and Hailey's assertion, heretofore tested only in hypothetical situations, could be supported by actual experimentation in regular English classes.

The study was limited in several ways. First of all, the limited six-week intervention was an expediency to conform with the area schools' testing and vacation schedules. Six weeks was the maximum amount of uninterrupted time available for the experiment. Second, the inability to control the curriculum across several grade levels and school districts posed a problem. Courses of study were varied across pairs of classrooms. The curriculum was, however, constant within the matched pairs. In addition, we felt that the environments being tested would not be

contaminated by variation in a subject matter presentations. Our notions were confirmed by the field notes made during the observations. The experiment would have been served better under laboratory or at least more heavily controlled conditions. However, as we continually discover, to conduct research in public school classrooms over an extended time period, you have to coexist with fire drills, intercom interruptions, unexpected assemblies, football rallies, and general classroom disturbance. Conducting research in uncontrolled environments can made the findings more generalizable to other uncontrolled situations, in effect, normal classrooms.

A sobering note to the research is that teachers may have limited influence in changing long-held attitudes. By the time students reach grade seven, they have had seven years of classroom experiences that have shaped their general, or dispositional, attitude toward school. A six-week, or even a year-long, intervention may not be strong enough to alter deeply ingrained attitudes. Consider, then, the difficulty of trying to change attitudes of high school seniors.

The relationship between classroom environment and quality of submitted writing was not measured here. Field notes and interviews with student teachers left us with the impression that by reducing apprehension in the classroom we were negatively affecting the quality of writing. Students became less meticulous and treated assignments more casually. Subsequent research might measure the effect of situationally manipulated variables on the quality of student writing.

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